CLAIMS

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1. A quinoline derivative of the Formula I

$$Z^2 - R^{14}$$

$$(R^1)_m \qquad \qquad (R^3)_n$$

$$I$$

wherein \mathbb{Z}^1 is an O, S, SO, SO₂, N(R²) or C(R²)₂ group, wherein each R² group, which may be the same or different, is hydrogen or (1-6C)alkyl;

m is 0, 1, 2, 3 or 4;

each R¹ group, which may be the same or different, is selected from halogeno, trifluoromethyl, cyano, isocyano, nitro, hydroxy, mercapto, amino, formyl, carboxy, carbamoyl, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxy, (2-6C)alkenyloxy, (2-6C)alkynyloxy, (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, N-(1-6C)alkyl]carbamoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino, (3-6C)alkenoylamino, N-(1-6C)alkyl-(3-6C)alkynoylamino, N-(1-6C)alkyl-(3-6C)alkynoylamino, N-(1-6C)alkyl-(3-6C)alkynoylamino, N-(1-6C)alkyl-

$$O^1-X^1-$$

wherein X¹ is a direct bond or is selected from O, S, SO, SO₂, N(R⁴), CO, CH(OR⁴), CON(R⁴), N(R⁴)CO, SO₂N(R⁴), N(R⁴)SO₂, OC(R⁴)₂, SC(R⁴)₂ and N(R⁴)C(R⁴)₂, wherein R⁴ is hydrogen or (1-6C)alkyl, and Q¹ is aryl, aryl-(1-6C)alkyl, (3-7C)cycloalkyl, (3-7C)cycloalkyl-(1-6C)alkyl, (3-7C)cycloalkenyl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl, or (R¹)_m is (1-3C)alkylenedioxy,

and wherein adjacent carbon atoms in any (2-6C)alkylene chain within a R¹ substituent are optionally separated by the insertion into the chain of a group selected from O, S, SO, SO₂,

 $N(R^5)$, CO, CH(OR⁵), CON(R⁵), $N(R^5)$ CO, SO₂N(R⁵), $N(R^5)$ SO₂, CH=CH and C=C wherein R⁵ is hydrogen or (1-6C)alkyl or, when the inserted group is $N(R^5)$, R⁵ may also be (2-6C)alkanoyl,

and wherein any CH₂=CH- or HC≡C- group within a R¹ substituent optionally bears at the terminal CH₂= or HC≡ position a substituent selected from halogeno, carboxy, carbamoyl, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, N-di-[(1-6C)alkyl]carbamoyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl, di-[(1-6C)alkyl]amino-(1-6C)alkyl or from a group of the formula:

$$Q^2 - X^2 -$$

wherein X² is a direct bond or is selected from CO and N(R⁶)CO, wherein R⁶ is hydrogen or (1-6C)alkyl, and Q² is aryl, aryl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl,

and wherein any CH, CH₂ or CH₃ group within a R¹ substituent optionally bears on each said CH, CH₂ or CH₃ group one or more halogeno or (1-6C)alkyl substituents or a substituent selected from hydroxy, cyano, amino, carboxy, carbamoyl, (1-6C)alkoxy, (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, NN-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkylsulphamoyl,

20 N.N-di-[(1-6C)alkyl]sulphamoyl, (1-6C)alkanesulphonylamino,
N-(1-6C)alkyl-(1-6C)alkanesulphonylamino or from a group of the formula:

$$-X^3-Q^3$$

wherein X³ is a direct bond or is selected from O, S, SO, SO₂, N(R⁷), CO, CH(OR⁷), CON(R⁷), N(R⁷)CO, SO₂N(R⁷), N(R⁷)SO₂, C(R⁷)₂O, C(R⁷)₂S and N(R⁷)C(R⁷)₂, wherein R⁷ is hydrogen or (1-6C)alkyl, and Q³ is aryl, aryl-(1-6C)alkyl, (3-7C)cycloalkyl, (3-7C)cycloalkyl-(1-6C)alkyl, (3-7C)cycloalkenyl-(1-6C)alkyl, heteroaryl-(1-6C)alkyl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl,

and wherein any aryl, heteroaryl or heterocyclyl group within a substituent on R¹ optionally bears 1, 2 or 3 substituents, which may be the same or different, selected from halogeno, trifluoromethyl, cyano, nitro, hydroxy, amino, carboxy, carbamoyl, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxy, (2-6C)alkenyloxy, (2-6C)alkynyloxy, (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylsulphonyl, (1-6C)alkylsulphonyl,

di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, N.N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino, N-(1-6C)alkylsulphamoyl, N,N-di-[(1-6C)alkyl]sulphamoyl, (1-6C)alkanesulphonylamino, N-(1-6C)alkyl-5 (1-6C)alkanesulphonylamino or from a group of the formula:

$$-X^4-R^8$$

wherein X4 is a direct bond or is selected from O and N(R9), wherein R9 is hydrogen or (1-6C)alkyl, and R⁸ is halogeno-(1-6C)alkyl, hydroxy-(1-6C)alkyl, (1-6C)alkoxy-(1-6C)alkyl, cyano-(1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl, di-[(1-6C)alkyl]amino-10 (1-6C)alkyl, (2-6C)alkanoylamino-(1-6C)alkyl or (1-6C)alkoxycarbonylamino-(1-6C)alkyl or from a group of the formula:

$$-X^{5}-O^{4}$$

wherein X5 is a direct bond or is selected from O, N(R10) and CO, wherein R10 is hydrogen or (1-6C)alkyl, and Q4 is aryl, aryl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or 15 heterocyclyl-(1-6C)alkyl which optionally bears 1 or 2 substituents, which may be the same or different, selected from halogeno, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl and (1-6C)alkoxy,

and wherein any heterocyclyl group within a substituent on R¹ optionally bears 1 or 2 oxo or thioxo substituents;

20 n is 0, 1, 2 or 3;

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each R³ group is halogeno, trifluoromethyl, cyano, nitro, hydroxy, amino, carboxy, carbamoyl, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxy, (2-6C)alkenyloxy, (2-6C)alkynyloxy, (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, 25 N.N-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino, (3-6C)alkenoylamino, N-(1-6C)alkyl-(3-6C)alkenoylamino, (3-6C)alkynoylamino, N-(1-6C)alkyl-(3-6C)alkynoylamino, \underline{N} -(1-6C)alkylsulphamoyl, \underline{N} -di-[(1-6C)alkyl]sulphamoyl, (1-6C)alkanesulphonylamino, \underline{N} -(1-6C)alkyl-(1-6C)alkanesulphonylamino or from a group of the formula: -X6-R11

wherein X⁶ is a direct bond or is selected from O and N(R¹²), wherein R¹² is hydrogen or (1-6C)alkyl, and R¹¹ is halogeno-(1-6C)alkyl, hydroxy-(1-6C)alkyl, (1-6C)alkoxy-(1-6C)alkyl, cyano-(1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl or di-[(1-6C)alkyl]amino-(1-6C)alkyl;

 \mathbb{Z}^2 is a C=C or $\mathbb{C}(\mathbb{R}^{13})$ = $\mathbb{C}(\mathbb{R}^{13})$ group, wherein each \mathbb{R}^{13} group, which may be the same or different, is hydrogen or (1-6C)alkyl; and

R¹⁴ is selected from halogeno, cyano, isocyano, formyl, carboxy, carbamoyl, (2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, N-(1-6C)alkylcarbamoyl, N-(1-6C)alkylcarbamoyl, N-(1-6C)alkylcarbamoyl, N-(1-6C)alkylcarbamoyl, N-(1-6C)alkylcarbamoyl, halogeno-(1-6C)alkyl, hydroxy-(1-6C)alkyl, (1-6C)alkyl, cyano-(1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl, (2-6C)alkanoylamino-(1-6C)alkyl, (1-6C)alkyl, (1-6C)alkyl, (1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkyl, (1-6C)alkyl, (1-6C)alkyl), (1-6C)alkyl, (1-6C)alkyl, (1-6C)alkyl), amino-(1-6C)alkyl, (1-6C)alkyl, (1-6C)alkyl, (1-6C)alkyl, (1-6C)alkyl, (1-6C)alkyl, (1-6C)alkyl, (1-6C)alkyl), amino-(1-6C)alkyl, (1-6C)alkyl, (1-6C)al

$$-X^{7}-Q^{5}$$

wherein X⁷ is a direct bond or is selected from CO, CH(OR¹⁵), CON(R¹⁵) or SO₂N(R¹⁵), wherein R¹⁵ is hydrogen or (1-6C)alkyl, and Q⁵ is aryl, aryl-(1-6C)alkyl, (3-7C)cycloalkyl, 15 (3-7C)cycloalkyl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl,

and wherein any CH, CH₂ or CH₃ group within a R¹⁴ substituent optionally bears on each said CH, CH₂ or CH₃ group one or more halogeno or (1-6C)alkyl substituents or a substituent selected from hydroxy, cyano, amino, carboxy, carbamoyl, (1-6C)alkoxy,

20 (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, N-(1-6C)alkylcarbamoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino, N-(1-6C)alkylsulphamoyl, N-di-[(1-6C)alkyl]sulphamoyl, (1-6C)alkanoylamino, N-(1-6C)alkanoylamino, N-(1-6C)alkyl]sulphamoyl, (1-6C)alkanoylamino, N-(1-6C)alkanoylamino, N-(1-6C)alkanoylamino, N-(1-6C)alkyl]sulphamoyl, (1-6C)alkanoylamino, N-(1-6C)alkanoylamino, N-(1-6C)alkyl]sulphamoyl, (1-6C)alkanoylamino, N-(1-6C)alkyl]sulphamoyl, (1-6C)alkanoylamino, N-(1-6C)alkyl]sulphamoyl, (1-6C)alkyl]sulphamoyl, (1-6C)alkanoylamino, N-(1-6C)alkyl]sulphamoyl, (1-6C)alkanoylamino, N-(1-6C)alkyl]sulphamoyl, (1-6C)alkanoylamino, N-(1-6C)alkanoylamino, N-(1-6C)alkyl]sulphamoyl, (1-6C)alkyl]sulphamoyl, (1-6C)alk

25 \underline{N} -(1-6C)alkyl-(1-6C)alkanesulphonylamino or from a group of the formula:

$$-X^8-Q^6$$

wherein X⁸ is a direct bond or is selected from O, S, SO, SO₂, N(R¹⁶), CO, CH(OR¹⁶), CON(R¹⁶), N(R¹⁶)CO, SO₂N(R¹⁶), N(R¹⁶)SO₂, C(R¹⁶)₂O, C(R¹⁶)₂S and N(R¹⁶)C(R¹⁶)₂, wherein R¹⁶ is hydrogen or (1-6C)alkyl, and Q⁶ is aryl, aryl-(1-6C)alkyl, (3-7C)cycloalkyl, (3-7C)cycloalkenyl, (3-7C)cycloalkenyl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl,

and wherein any aryl, heteroaryl or heterocyclyl group within a substituent on R¹⁴ optionally bears 1, 2 or 3 substituents, which may be the same or different, selected from halogeno, trifluoromethyl, cyano, nitro, hydroxy, amino, carboxy, carbamoyl, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxy, (2-6C)alkenyloxy, (2-6C)alkynyloxy,

- 5 (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (1-6C)alkoxycarbonyl, N-(1-6C)alkylcarbamoyl, N-(1-6C)alkylcarbamoyl, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino, N-(1-6C)alkylsulphamoyl, N-(1-6C)alkylsulphamoyl, (1-6C)alkylsulphamoyl, (1-
- 10 (1-6C)alkanesulphonylamino or from a group of the formula:

$$-X^9-R^{17}$$

wherein X⁹ is a direct bond or is selected from O and N(R¹⁸), wherein R¹⁸ is hydrogen or (1-6C)alkyl, and R¹⁷ is halogeno-(1-6C)alkyl, hydroxy-(1-6C)alkyl, (1-6C)alkyl, (1-6C)alkyl, cyano-(1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl, di-[(1-6C)alkyl]amino-(1-6C)alkyl, (2-6C)alkanoylamino-(1-6C)alkyl, (1-6C)alkoxycarbonylamino-(1-6C)alkyl, or from a group of the formula:

$$-X^{10}-Q^7$$

wherein X¹⁰ is a direct bond or is selected from O, N(R¹⁹) and CO, wherein R¹⁹ is hydrogen or (1-6C)alkyl, and Q⁷ is aryl, aryl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl which optionally bears 1 or 2 substituents, which may be the same or different, selected from halogeno, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl and (1-6C)alkoxy,

and wherein any heterocyclyl group within a substituent on \mathbb{R}^{14} optionally bears 1 or 2 oxo or thioxo substituents;

- 25 or a pharmaceutically-acceptable salt thereof.
 - 2. A quinoline derivative of the Formula I or a pharmaceutically acceptable salt thereof, according to claim 1 wherein R^1 , R^2 , R^3 , Z^1 , Z^2 , m and n have any of the meanings defined in claim 1 and
- R¹⁴ is selected from halogeno, cyano, formyl, carboxy, carbamoyl, (1-6C)alkoxycarbonyl, <u>N</u>-(1-6C)alkylcarbamoyl, <u>N,N</u>-di-[(1-6C)alkyl]carbamoyl, (2-6C)alkanoyl, <u>N-(1-6C)alkyl</u>sulphamoyl, <u>N,N</u>-di-[(1-6C)alkyl]sulphamoyl,

halogeno-(1-6C)alkyl, hydroxy-(1-6C)alkyl, (1-6C)alkoxy-(1-6C)alkyl, cyano-(1-6C)alkyl, amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl, di-[(1-6C)alkyl]amino-(1-6C)alkyl, (2-6C)alkanoylamino-(1-6C)alkyl or from a group of the formula:

$$-X^{7}-Q^{5}$$

5 wherein X⁷ is a direct bond or CO and Q⁵ is aryl, aryl-(1-6C)alkyl, heteroaryl, heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl,

and wherein any CH₂ or CH₃ group within a R¹⁴ substituent optionally bears on each said CH₂ or CH₃ group one or more halogeno or (1-6C)alkyl substituents or a substituent selected from hydroxy, cyano, amino, (1-6C)alkoxy, (1-6C)alkylthio, (1-6C)alkylsulphinyl, (1-6C)alkylsulphonyl, (1-6C)alkylamino, di-[(1-6C)alkyl]amino, (2-6C)alkanoyl, (2-6C)alkanoyloxy, (2-6C)alkanoylamino, N-(1-6C)alkyl-(2-6C)alkanoylamino or from a group of the formula:

$$-X^8-Q^6$$

wherein X⁸ is a direct bond or is selected from O, N(R¹⁶), CON(R¹⁶), N(R¹⁶)CO and C(R¹⁶)₂O,
wherein R¹⁶ is hydrogen or (1-6C)alkyl, and Q⁶ is heteroaryl,
heteroaryl-(1-6C)alkyl, heterocyclyl or heterocyclyl-(1-6C)alkyl,

and wherein any aryl, heteroaryl or heterocyclyl group within a substituent on R¹⁴ optionally bears 1, 2 or 3 substituents, which may be the same or different, selected from halogeno, trifluoromethyl, hydroxy, amino, carbamoyl, (1-6C)alkyl, (2-8C)alkenyl, (2-8C)alkynyl, (1-6C)alkoxy, (1-6C)alkylsulphonyl, N-(1-6C)alkylcarbamoyl,

N.N-di-[(1-6C)alkyl]carbamoyl and (2-6C)alkanoyl, or optionally bears 1 substituent selected from a group of the formula:

$$-X^9-R^{17}$$

wherein X⁹ is a direct bond or is selected from O and N(R¹⁸), wherein R¹⁸ is hydrogen or

25 (1-6C)alkyl, and R¹⁷ is hydroxy-(1-6C)alkyl, (1-6C)alkoxy-(1-6C)alkyl, cyano-(1-6C)alkyl,
amino-(1-6C)alkyl, (1-6C)alkylamino-(1-6C)alkyl, di-[(1-6C)alkyl]amino-(1-6C)alkyl,
(2-6C)alkanoylamino-(1-6C)alkyl, (1-6C)alkoxycarbonylamino-(1-6C)alkyl, and from a group
of the formula:

$$-X^{10} - Q^7$$

wherein X¹⁰ is a direct bond or is selected from O, N(R¹⁹) and CO, wherein R¹⁹ is hydrogen or (1-6C)alkyl, and Q⁷ is heterocyclyl or heterocyclyl-(1-6C)alkyl which optionally bears 1 or 2

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substituents, which may be the same or different, selected from halogeno, (1-6C)alkyl and (1-6C)alkoxy,

and wherein any heterocyclyl group within a substituent on R¹⁴ optionally bears 1 or 2 oxo substituents;

3. A quinoline derivative of the Formula I according to claim 1 wherein: Z^1 is O or NH;

m is 1 and the R¹ group is located at the 5-, 6- or 7-position or m is 2 and each R¹ group, which may be the same or different, is located at the 5- and 7-positions or at the 6- and 7-positions and R¹ is selected from hydroxy, amino, methyl, ethyl, propyl, butyl, methoxy, ethoxy, propoxy, isopropoxy, butoxy, pent-4-ynyloxy, hex-5-ynyloxy, methylamino, ethylamino, dimethylamino, diethylamino, acetamido, propionamido, 2-imidazol-1-ylethoxy, 2-(1,2,4-triazol-1-yl)ethoxy, tetrahydrofuran-3-yloxy, tetrahydropyran-4-yloxy, 2-pyrrolidin-1-ylethoxy, 3-pyrrolidin-1-ylpropoxy, 4-pyrrolidin-1-ylbutoxy, pyrrolidin-2-ylmethoxy, 2-pyrrolidin-2-ylethoxy,

- 3-pyrrolidin-2-ylpropoxy, 2-morpholinoethoxy, 3-morpholinopropoxy, 4-morpholinobutoxy, 2-(1,1-dioxotetrahydro-4<u>H</u>-1,4-thiazin-4-yl)ethoxy, 3-(1,1-dioxotetrahydro-4<u>H</u>-1,4-thiazin-4-yl)propoxy, 2-piperidinoethoxy, 3-piperidinopropoxy, 4-piperidinobutoxy, piperidin-3-yloxy, piperidin-4-yloxy, piperidin-3-yloxy, piperidin-4-yloxy,
- 20 2-piperidin-3-ylethoxy, 3-piperidin-3-ylpropoxy, 2-piperidin-4-ylethoxy, 3-piperidin-4-ylpropoxy, 2-homopiperidin-1-ylethoxy, 3-homopiperidin-1-ylpropoxy, 2-piperazin-1-ylethoxy, 3-piperazin-1-ylpropoxy, 4-piperazin-1-ylbutoxy, 2-homopiperazin-1-ylethoxy and 3-homopiperazin-1-ylpropoxy,

and wherein adjacent carbon atoms in any (2-6C)alkylene chain within a R¹ substituent
25 are optionally separated by the insertion into the chain of a group selected from O, NH,
N(Me), CH=CH and C≡C,

and wherein any CH₂ or CH₃ group within a R¹ substituent optionally bears on each said CH₂ or CH₃ group one or more fluoro or chloro groups or a substituent selected from hydroxy, amino, methoxy, methylsulphonyl, methylamino, dimethylamino, diethylamino, M-ethyl-N-methylamino, M-isopropyl-N-methylamino, M-methyl-N-propylamino and acetoxy; and wherein any heteroaryl or heterocyclyl group within a substituent on R¹ optionally bears 1 or 2 substituents, which may be the same or different, selected from fluoro, chloro,

trifluoromethyl, hydroxy, amino, carbamoyl, methyl, ethyl, methoxy, N-methylcarbamoyl and N,N-dimethylcarbamoyl and a pyrrolidin-2-yl, piperidin-3-yl, piperidin-4-yl, piperazin-1-yl or homopiperazin-1-yl group within a R¹ substituent is optionally N-substituted with allyl, methylsulphonyl, acetyl, 2-fluoroethyl, 3-fluoropropyl, 2-methoxyethyl, 3-methoxypropyl, cyanomethyl, 2-aminoethyl, 3-aminopropyl, 2-methylaminoethyl, 3-methylaminopropyl, 2-dimethylaminoethyl, 3-dimethylaminopropyl, 2-pyrrolidin-1-ylethyl, 3-pyrrolidin-1-ylpropyl, 2-morpholinoethyl, 3-morpholinopropyl, 2-piperidinoethyl, 3-piperidinopropyl, 2-piperazin-1-ylethyl or 3-piperazin-1-ylpropyl, the last 8 of which substituents each optionally bears 1 or 2 substituents, which may be the same or different, selected from fluoro, chloro, methyl and methoxy,

and wherein any heterocyclyl group within a substituent on R¹ optionally bears 1 or 2 oxo substituents;

n is 0 or 1 and the R³ group, if present, is located at the 5- or 6-position of the benzofuran-7-yl group and is selected from fluoro, chloro, bromo, trifluoromethyl, cyano, 15 hydroxy, methyl, ethyl, vinyl, allyl, ethynyl, methoxy and ethoxy;

Z² is a C≡C or CH=CH group; and

R¹⁴ is selected from cyano, formyl, carboxy, carbamoyl, methoxycarbonyl, ethoxycarbonyl, N-methylcarbamoyl, N-ethylcarbamoyl, N-ethylcarbamoyl, N-ethylcarbamoyl, N-ethylcarbamoyl, acetyl, propionyl, chloromethyl, 2-chloroethyl, 3-chloropropyl, hydroxymethyl, 2-hydroxyethyl, 3-hydroxypropyl, methoxymethyl, 2-methoxyethyl, 3-methoxypropyl, cyanomethyl, 2-cyanoethyl, 3-cyanopropyl, methylaminomethyl, ethylaminomethyl, 2-methylaminoethyl, 3-methylaminopropyl, 2-ethylaminoethyl, 3-ethylaminopropyl, dimethylaminomethyl, 2-dimethylaminoethyl, 3-dimethylaminopropyl, acetamidomethyl, 2-acetamidoethyl and 3-acetamidopropyl, or from a group of the formula:

$$-X^{7}-O^{5}$$

wherein X⁷ is a direct bond or CO and Q⁵ is 1-pyrrolidinyl, morpholino, 1,1-dioxotetrahydro-4<u>H</u>-1,4-thiazin-4-yl, piperidino, 1-homopiperidinyl, piperazin-1-yl, homopiperazin-1-yl, 1-pyrrolidinylmethyl, morpholinomethyl, piperidinomethyl, 1-homopiperidinylmethyl, 1,1-dioxotetrahydro-4<u>H</u>-1,4-thiazin-4-ylmethyl, piperazin-1-ylmethyl, homopiperazin-1-ylmethyl or 3-morpholinopropyl,

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and wherein any CH₂ or CH₃ group within a R¹⁴ substituent optionally bears on each said CH₂ or CH₃ group one or more fluoro, chloro or methyl groups or a substituent selected from hydroxy, amino, methoxy, methylamino, dimethylamino, acetoxy, acetamido and N-methylacetamido,

and wherein any heterocyclyl group within a substituent on R¹⁴ optionally bears 1, 2 or 3 substituents, which may be the same or different, selected from hydroxy, amino, carbamoyl, methyl, ethyl, allyl, 2-propynyl, methoxy, methylsulphonyl, N-methylcarbamoyl, N,N-dimethylcarbamoyl and acetyl, or optionally bears 1 substituent selected from a group of the formula:

 $-X^9-R^{17}$

wherein X^9 is a direct bond and R^{17} is 2-hydroxyethyl, 3-hydroxypropyl, 2-methoxyethyl, 3-methoxypropyl, cyanomethyl, aminomethyl, methylaminomethyl, dimethylaminomethyl, acetamidomethyl, methoxycarbonylaminomethyl, ethoxycarbonylaminomethyl or tert-butoxycarbonylaminomethyl,

and wherein any heterocyclyl group within a substituent on R^{14} optionally bears 1 or 2 oxo substituents; or a pharmaceutically-acceptable acid-addition salt thereof.

- 4. A quinoline derivative of the Formula I, or a pharmaceutically acceptable salt thereof,
 20 according to claim 1 wherein R¹, R², R³, R¹⁴, Z², m and n have any of the meanings defined in
 claim 1 and Z¹ is NH.
 - 5. A quinoline derivative of the Formula I according to claim 1 wherein: Z^1 is NH;
- at the 7-position and is selected from methoxy, ethoxy, 2-fluoroethoxy, 2-chloroethoxy, 3-fluoropropoxy, 3-chloropropoxy, 2-methylsulphonylethoxy, 3-methylsulphonylpropoxy, 2-(2-chloroethoxy)ethoxy, 2-(2-methoxyethoxy)ethoxy, 2-pyrrolidin-1-ylethoxy, 3-pyrrolidin-1-ylpropoxy, 2-morpholinoethoxy, 3-morpholinopropoxy,
- 30 2-(1,1-dioxotetrahydro-4<u>H</u>-1,4-thiazin-4-yl)ethoxy, 3-(1,1-dioxotetrahydro-4<u>H</u>-1,4-thiazin-4-yl)propoxy, 2-piperidinoethoxy, 3-piperidinopropoxy, piperidin-3-ylmethoxy, <u>N</u>-methylpiperidin-3-ylmethoxy, piperidin-4-ylmethoxy, <u>N</u>-methylpiperidin-4-ylmethoxy,

- 2-piperidin-3-ylethoxy, 2-(N-methylpiperidin-3-yl)ethoxy, 3-piperidin-3-ylpropoxy,
- 3-(N-methylpiperidin-3-yl)propoxy, 2-piperidin-4-ylethoxy, 2-(N-methylpiperidin-
- 4-yl)ethoxy, 3-piperidin-4-ylpropoxy, 3-(N-methylpiperidin-4-yl)propoxy,
- 2-(4-methylpiperazin-1-yl)ethoxy, 3-(4-methylpiperazin-1-yl)propoxy,
- 5 3-(4-allylpiperazin-1-yl)propoxy, 3-(4-methylsulphonylpiperazin-1-yl)propoxy,
 - 3-(4-acetylpiperazin-1-yl)propoxy, 2-(4-cyanomethylpiperazin-1-yl)ethoxy,
 - 3-(4-cyanomethylpiperazin-1-yl)propoxy, 2-[4-(2-fluoroethyl)piperazin-1-yl]ethoxy,
 - 3-[4-(2-fluoroethyl)piperazin-1-yl]propoxy, 2-(3-oxopiperazin-1-yl)ethoxy,
 - 3-(3-oxopiperazin-1-yl)propoxy, 2-(2-pyrrolidin-1-ylethoxy)ethoxy,
- 10 2-(2-morpholinoethoxy)ethoxy, 2-(2-piperidinoethoxy)ethoxy and
 - 2-[2-(4-methylpiperazin-1-yl)ethoxy]ethoxy;

n is 0 or n is 1 and the R³ group, if present, is located at the 5- position of the benzofuran-7-yl group and is selected from chloro and bromo;

the -Z²-R¹⁴ group is located at the 4-position on the benzofuran-7-yl group,

15 Z^2 is a C=C or CH=CH group; and

R¹⁴ is selected from cyano, formyl, carboxy, carbamoyl, methoxycarbonyl, ethoxycarbonyl, <u>N</u>-methylcarbamoyl, <u>N</u>-ethylcarbamoyl, <u>N</u>-(2-methoxyethyl)carbamoyl, <u>N</u>, odimethylcarbamoyl, <u>N</u>-ethyl-<u>N</u>-methylcarbamoyl, <u>N</u>-(2-methoxyethyl)<u>N</u>-methylcarbamoyl, acetyl, propionyl, chloromethyl, 2-chloroethyl, 3-chloropropyl,

- 20 hydroxymethyl, 2-hydroxyethyl, 3-hydroxypropyl, methoxymethyl, 2-methoxyethyl, 3-methoxypropyl, dimethylaminomethyl, 2-dimethylaminoethyl, 3-dimethylaminopropyl, 1-pyrrolidinylcarbonyl, morpholinocarbonyl, 1,1-dioxotetrahydro-4H-1,4-thiazin-4-ylcarbonyl, piperidinocarbonyl, piperazin-1-ylcarbonyl, 1-pyrrolidinylmethyl, morpholinomethyl, piperidinomethyl, 1,1-dioxotetrahydro-4H-1,4-thiazin-4-ylmethyl,
- 25 piperazin-1-ylmethyl and 3-morpholinopropyl;

or a pharmaceutically-acceptable acid-addition salt thereof.

- A quinoline derivative of the Formula I according to claim 1 wherein:
 Z¹ is NH;
- m is 2 and the first R¹ group is a 6-methoxy group and the second R¹ group is located at the 7-position and is selected from methoxy, ethoxy, 2-fluoroethoxy, 2-chloroethoxy, 3-fluoropropoxy, 3-chloropropoxy, 2-(2-chloroethoxy)ethoxy, 2-(2-methoxyethoxy)ethoxy,

- 2-pyrrolidin-1-ylethoxy, 3-pyrrolidin-1-ylpropoxy, 2-morpholinoethoxy,
- 3-morpholinopropoxy, 2-(1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl)ethoxy,
- 3-(1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl)propoxy, 2-piperidinoethoxy,
- 3-piperidinopropoxy, 2-(4-methylpiperazin-1-yl)ethoxy, 3-(4-methylpiperazin-1-yl)propoxy,
- 5 3-(4-allylpiperazin-1-yl)propoxy, 3-(4-methylsulphonylpiperazin-1-yl)propoxy,
 - 3-(4-acetylpiperazin-1-yl)propoxy, 2-(4-cyanomethylpiperazin-1-yl)ethoxy,
 - 3-(4-cyanomethylpiperazin-1-yl)propoxy, 2-[4-(2-fluoroethyl)piperazin-1-yl]ethoxy,
 - 3-[4-(2-fluoroethyl)piperazin-1-yl]propoxy, 2-(3-oxopiperazin-1-yl)ethoxy,
 - 3-(3-oxopiperazin-1-yl)propoxy and 2-(2-pyrrolidin-1-ylethoxy)ethoxy;
- n is 0 or n is 1 and R³ is a chloro group located at the 5-position of the benzofuran-7-yl group;
 - the $-Z^2-R^{14}$ group is located at the 4-position on the benzofuran-7-yl group, Z^2 is a C=C group; and
 - R¹⁴ is selected from hydroxymethyl, methoxymethyl, dimethylaminomethyl,
- 15 1-pyrrolidinylmethyl, morpholinomethyl, piperidinomethyl, 1,1-dioxotetrahydro-
 - 4H-1,4-thiazin-4-ylmethyl and piperazin-1-ylmethyl;
 - or a pharmaceutically-acceptable acid-addition salt thereof.
 - 7. A quinoline derivative of the Formula I according to claim 1 wherein:
- Z^1 is NH:
 - m is 2 and the first R¹ group is a 6-methoxy group and the second R¹ group is located at the 7-position and is selected from methoxy, ethoxy, 2-fluoroethoxy, 2-chloroethoxy,
 - 3-fluoropropoxy, 3-chloropropoxy, 2-(2-chloroethoxy)ethoxy, 2-(2-methoxyethoxy)ethoxy,
 - 2-pyrrolidin-1-ylethoxy, 3-pyrrolidin-1-ylpropoxy, 2-morpholinoethoxy,
- 25 3-morpholinopropoxy, 2-(1,1-dioxotetrahydro-4H-1,4-thiazin-4-yl)ethoxy,
 - 3-(1,1-dioxotetrahydro-4<u>H</u>-1,4-thiazin-4-yl)propoxy, 2-piperidinoethoxy,
 - 3-piperidinopropoxy, 2-(4-methylpiperazin-1-yl)ethoxy, 3-(4-methylpiperazin-1-yl)propoxy,
 - 3-(4-allylpiperazin-1-yl)propoxy, 3-(4-methylsulphonylpiperazin-1-yl)propoxy,
 - 3-(4-acetylpiperazin-1-yl)propoxy, 2-(4-cyanomethylpiperazin-1-yl)ethoxy,
- 30 3-(4-cyanomethylpiperazin-1-yl)propoxy, 2-[4-(2-fluoroethyl)piperazin-1-yl]ethoxy,
 - 3-[4-(2-fluoroethyl)piperazin-1-yl]propoxy, 2-(3-oxopiperazin-1-yl)ethoxy,
 - 3-(3-oxopiperazin-1-yl)propoxy and 2-(2-pyrrolidin-1-ylethoxy)ethoxy;

n is 0 or n is 1 and R³ is a chloro group located at the 5-position of the 1,3-benziodioxol-4-yl group;

the $-Z^2-R^{14}$ group is located at the 4-position on the benzofuran-7-yl group, Z^2 is a CH=CH group; and

- R¹⁴ is selected from cyano, carboxy, carbamoyl, methoxycarbonyl, ethoxycarbonyl, N-methylcarbamoyl, N-ethylcarbamoyl, N-(2-methoxyethyl)carbamoyl, N-dimethylcarbamoyl, N-ethyl-N-methylcarbamoyl, N-(2-methoxyethyl)-N-methylcarbamoyl, acetyl, propionyl, 1-pyrrolidinylcarbonyl, morpholinocarbonyl, 1,1-dioxotetrahydro-4H-1,4-thiazin-4-ylcarbonyl, piperidinocarbonyl and piperazin-1-ylcarbonyl; or a pharmaceutically-acceptable acid-addition salt thereof.
 - 8. A process for the preparation of a quinoline derivative of the Formula I or a pharmaceutically-acceptable salt thereof, according to claim 1 which comprises:-
- 15 (a) the reaction of a quinoline of the Formula Π

$$(R^1)_m$$
 $(R^1)_m$
 H

wherein L is a displaceable group and m and R¹ have any of the meanings defined in claim 1 hereinbefore except that any functional group is protected if necessary, with a compound of the Formula III

$$(R^3)_n$$
 Z^2-R^{14}
 HZ^1
 O
 O
III

20

wherein Z^1 is O, S, or $N(R^2)$ and n, R^3 , R^2 , Z^2 and R^{14} have any of the meanings defined in claim 1 except that any functional group is protected if necessary, whereafter any protecting group that is present is removed by conventional means;

25 (b) for the production of those compounds of the Formula I wherein at least one R¹ group is a group of the formula

 Q^1-X^1

wherein Q¹ is an aryl-(1-6C)alkyl, (3-7C)cycloalkyl-(1-6C)alkyl, (3-7C)cycloalkenyl-(1-6C)alkyl, heteroaryl-(1-6C)alkyl or heterocyclyl-(1-6C)alkyl group or an optionally substituted alkyl group and X¹ is an oxygen atom, the coupling, conveniently in the presence of a suitable dehydrating agent, of a quinoline of the Formula V

wherein m, R¹, Z¹, n, R³, Z² and R¹⁴ have any of the meanings defined in claim 1, except that any functional group is protected if necessary, with an appropriate alcohol of the formula Q¹-OH wherein any functional group is protected if necessary, whereafter any protecting group that is present is removed by conventional means;

- (c) for the production of those compounds of the Formula I wherein R¹ is an amino-substituted (1-6C)alkoxy group (such as 2-homopiperidin-1-ylethoxy or 3-dimethylaminopropoxy), the reaction of a compound of the Formula I wherein R¹ is a halogeno-substituted (1-6C)alkoxy group with a heterocyclyl compound or an appropriate amine;
 - (d) for the production of those compounds of the Formula I wherein an R¹ group contains a (1-6C)alkoxy or substituted (1-6C)alkoxy group or a (1-6C)alkylamino or substituted (1-6C)alkylamino group, the alkylation of a quinoline derivative of the Formula I wherein the R¹ group contains a hydroxy group or a primary or secondary amino group as appropriate;
- 20 (e) for the production of those compounds of the Formula I wherein Z¹ is a SO or SO₂ group, wherein an R¹ or R³ substituent is a (1-6C)alkylsulphinyl or (1-6C)alkylsulphonyl group or wherein an R¹, R³ or R¹⁴ substituent contains a SO or SO₂ group, the oxidation of a compound of the Formula I wherein Z¹ is a S group or wherein an R¹ or R³ substituent is a (1-6C)alkylthio group or wherein an R¹, R³ or R¹⁴ substituent contains a S group as appropriate;

(f) the reaction of a compound of the Formula VI

 \mathbf{VI}

wherein L is a displaceable group and m, R^1 , Z^1 , n and R^3 have any of the meanings defined in claim 1 except that any functional group is protected if necessary, with a compound of the

5 Formula VII

wherein Z^2 is a C=C or $C(R^{13})$ = $C(R^{13})$ group and R^{13} and R^{14} have any of the meanings defined in claim 1 except that any functional group is protected if necessary, whereafter any protecting group that is present is removed by conventional means;

- 10 (g) for the production of a compound of the Formula I wherein R^{14} is a carboxy group, the cleavage of a compound of the Formula I wherein R^{14} is a (1-6C)alkoxycarbonyl group;
 - (h) the reaction of a compound of the Formula I wherein R^{14} is a carboxy group with an appropriate amine to form a further compound of the Formula I wherein R^{14} is a carbamoyl, \underline{N} -(1-6C)alkylcarbamoyl, \underline{N} , \underline{N} -di-[(1-6C)alkyl]carbamoyl or heterocyclylcarbonylamino
- 15 group; or
 - (i) a coupling reaction of a compound of the Formula VIII

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$$C = CH$$

$$C = CH$$

$$(R^1)_m$$

$$(R^1)_m$$

$$(R^1)_m$$

VIII

wherein m, R¹, Z¹, n and R³ have any of the meanings defined in claim 1 except that any functional group is protected if necessary, with a compound of the Formula IX

wherein L is a displaceable group and R¹⁴ has any of the meanings defined in claim 1 except that any functional group is protected if necessary, whereafter any protecting group that is present is removed by conventional means;

and when a pharmaceutically-acceptable salt of a quinoline derivative of Formula I is required it may be obtained using a conventional procedure.

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- 9. A pharmaceutical composition which comprises a quinoline derivative of the Formula I, or a pharmaceutically-acceptable salt thereof as defined in claim 1 in association with a pharmaceutically-acceptable diluent or carrier.
- 15 10. A quinoline derivative of the Formula I or a pharmaceutically acceptable salt thereof for use in a method of the treatment of the human or animal body by therapy.
 - 11. A quinoline derivative of the Formula I or a pharmaceutically acceptable salt thereof, as defined in claim 1 for use in the treatment of cancer.

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12. The use of a quinoline derivative of the Formula I or a pharmaceutically acceptable salt thereof as defined in claim 1 in the manufacture of a medicament for use as an anti-proliferative agent in the containment and/or treatment of solid tumour disease.

5

13. The use of a quinoline derivative of the Formula I or a pharmaceutically acceptable salt thereof as defined in claim 1 in the manufacture of a medicament for use as an anti-invasive agent in the containment and/or treatment of solid tumour disease.